WATER SUPPLY SUMMARY AND OUTLOOK FOR OREGON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above in cooperation with other Federal, State and private organizations.

AS OF
OCT. 1, 1967

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data or reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Listed below are water supply outlook reports based on Federal-State-Private Cooperative snow surveys. Those published by the Soil Conservation Service may be obtained from Soil Conservation Service, Room 507, Federal Building, 701 N. W. Glisan, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

D. A. WILLIAMS, Administrator

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 507, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	P. O. Box 38, Boise, Idaho 83701
Montana	P. O. Box 855, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4001 Federal Building, Salt Lake City, Utah 84111
Washington	840 Bon Marche Bldg., Spokane, Washington 99206
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

USDA-SCS-PORTLAND, OREG. 1966

WATER SUPPLY SUMMARY AND OUTLOOK
for
OREGON

ISSUED

OCTOBER 8, 1967

Report prepared by

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WATER SUPPLY SUMMARY AND OUTLOOK for OREGON

October 1, 1967

Oregon's 1967 water supplies from major streams have been satisfactory in spite of the hot, dry summer that irritated many Oregonians. The State's reservoirs and mountain snowpacks have again effectively provided satisfactory water supplies except on the smaller streams where lack of rainfall and excessive summer heat reduced streamflow to scanty amounts about mid-August.

Mountain snow continued to increase during April and most of May--about one month longer than usual. Snowmelt and runoff was delayed by cool temperatures. As a result, streams peaked later than usual and provided good water supplies later than expected in the irrigation season. The excessive heat and drought was practically continuous from about June 10th through September according to the U. S Weather Bureau records.

Nearly one million acres of irrigated land, dependent upon natural streamflow, had a better season than was expected because peak runoff from snowmelt was delayed nearly 30 days. Most of these acres produced near average crops--some more, some less--but all felt the pinch of extreme heat and dryness toward the season's end. In spite of these adverse conditions, Oregon's hay crop is one of the best in recent years.

Reservoired water supplies "saved the day" and produced excellent crops on more than 450,000 irrigated acres. Carryover water is 20 percent greater than a year ago in 25 irrigation reservoirs. Storage is now less than 80 percent of the usual October 1 amount in only five of the State's reservoirs.

Soil moisture measurements are near record lows, similar to the very dry conditions of last year on this date. Early October storms have already begun the re-priming of the soils and, hopefully, further storms will add to the moisture in the soils before the freeze-up and the beginning of snow accumulation in the mountains.

Month end ground water levels in key wells are below average according to the U. S. Geological Survey and about the same as last year under extremely dry conditions.

The base flow of streams, always important to next year's flows, is definitely below average and close to record low in some parts of the Klamath and Deschutes watersheds.

Fall rainfall and winter snow accumulation will have to be generously above average to produce adequate streamflow and water supplies in the 1968 season.

Details of the water supply situation in different Oregon regions are as follows:

Owyhee-Malheur Watersheds

Irrigation water supplies in Malheur County in 1967 have been adequate for all irrigation districts. This was primarily due to available stored water supplies which were near average as the season opened. Carryover water in reservoirs is 30 percent above the average--an excellent start for the 1968 season.

Later than usual snow accumulation coupled with cool temperatures and unusually good precipitation in May have caused streams to peak higher and later than usual, resulting in better water supplies than were anticipated. The flow into Lake Owyhee in the period April through September was 353,400 acre feet compared with the 15-year average (1948-62) of 381,300 acre feet, according to preliminary figures from the North Board of Control at Nyssa, Oregon.

Carryover water supplies in Antelope Reservoir of 9,800 acre feet should give an excellent start for next year compared with an empty reservoir at this time last year. Lake Owyhee has a carryover of 332,700 acre feet compared with 270,000 a year ago. Water stored in the three reservoirs on Malheur River, Warmsprings, Agency Valley, and Bully Creek, totals 80,700 acre feet compared with 37,700 acre feet at the close of the season a year ago.

Soil moisture as measured in the upper watersheds is at a record low as it was last year at this date. Fall rainfall has already begun the important re-priming of the watersheds. It is hoped that further storms will add to the soil moisture before the freeze-up and the beginning of snow accumulation in the mountains. The outlook for the 1968 season is satisfactory if average winter precipitation and snow accumulation occur.

Burnt-Powder-Pine-Grande Ronde Watersheds

Irrigation water supplies in Baker, Union, and Wallowa Counties in 1967 have been satisfactory except for those acres that had no stored water to draw on. Even the non-irrigated lands produced remarkably fine crops due to a mild winter with lots of snow and rain and a late spring. In all areas the water supplies were greatly superior to those of 1966.

Carryover water in Unity Reservoir on Burnt River is 3,200 acre feet compared with only 700 acre feet last year. Wallowa Lake carryover is more than 12,000 acre feet greater than last year. The reservoir behind Mason Dam is scheduled to begin storage in November 1967.

Streamflow from April 1 to September 30 on the Grande Ronde at La Grande was about 155,000 acre feet or 76 percent of the 15-year average (1948-62) compared with the April 1 forecast of 174,000 or 86 percent average. The flow in 1966 was a meager 68,500 acre feet.

Soil moisture as measured in the upper watersheds is at a record low on most watersheds. It is hoped that further storms will add to the soil moisture before the freeze-up and the beginning of snow accumulation.

The outlook for the 1968 season is satisfactory only if above average winter precipitation and snow accumulation occur.

Umatilla-Walla Walla Watersheds

Irrigation water supplies in the Umatilla, Morrow, and Gilliam Counties in the 1967 season have been fairly adequate only where stored water supplies were available. Elsewhere streamflow held up remarkably, considering the extreme heat and lack of precipitation, but proved inadequate after mid-July or August first in many circumstances.

Stored water supplies "saved the day" for many irrigated acres and may provide some carryover water for users of McKay Reservoir if the 7,000 acre feet now held is not needed this season. Cold Springs Reservoir is empty as is the case at the end of each season.

Flow of the Umatilla River at Pendleton in the April through September period was 127,500 acre feet according to preliminary figures by the U. S. Geological Survey. This flow is 70 percent of the 15-year average (1948-62). In the same six months of 1966 the flow was only 76,700 acre feet or 42 percent average.

Soil moisture, as measured in the upper watersheds, is nearly record low and about as dry as at this time last year. Fall rainfall has already begun the important re-priming of the watersheds. It is hoped that further storms will add substantially to soil moisture before the freez-up and the beginning of snow accumulation in the mountains.

The outlook for the 1968 season is satisfactory only if above average winter precipitation and snow accumulation occur.

Upper John Day Watersheds

Irrigation water supplies in the John Day Basin in the 1967 season have been much better than the 1966 season but shortages of water in the latter part of the 1967 season have occurred widely in this watershed. Flow of many streams fell off to critical levels beginning in early July.

Flow of the John Day River at Service Creek, according to provisional records of the U. S. Geological Survey, was 773,000 acre feet or 80 percent of the 15-year average (1948-62) for the period April 1 through September 30. Last year this stream produced only 341,000 acre feet or 35 percent average for the same period.

Soil moisture, as measured in the upper portion of the watersheds, is at record low levels, lower than a year ago in many places. Many stockwater springs, ponds, and intermittent streams have dried up significantly and lowered earlier than usual.

Fall rainfall has already begun the important re-priming of the watersheds. It is hoped that further storms will add substantially to the soil moisture before the freeze-up and the beginning of snow accumulation.

The outlook for the 1968 season is satisfactory only if above average winter precipitation and snow accumulation occur.

Upper Deschutes and Crooked River Watersheds

Irrigation water supplies in the Deschutes-Crooked River watersheds in the 1967 season have been mostly satisfactory but "tight" for some organized irrigation districts in this area. A well planned conservation program amoung irrigators in the North Unit District caused substantial water savings and brought their 50,000 acres through a satisfactory season successfully. Small streams and tributaries were short of water by early August in many cases.

Water stored in the area's reservoirs, and a greatly delayed snow-melt season, caused streams to peak later than usual providing larger amounts of water later than usual. However, excessive heat and drought caused flow to fall off about the end of July in many streams.

Carryover storage in Prineville and Ochoco Reservoirs on October first totals 120,000 acre feet compared with 100,000 a year ago. Crescent Lake now contains 32,500 acre feet compared with 35,000 last year. Crane Prairie Reservoir has 10,800 acre feet against 12,200 in 1966 and Wickiup holds 12,800 acre feet compared with 28,300 acre feet last year. Water in both Crane Prairie and Wickiup Reservoirs is disappointingly low but reported to be increasing slowly.

The April through September flow of the Deschutes River at Moody (corrected for storage) is reported by the U. S. Geological Survey to be 73 percent of the 15-year average (1948-62) in contrast with 84 percent average last year. Preliminary data from Bruce Estes, Watermaster for the Deschutes vicinity, indicates that flow of springs at and above the Sheep Springs location below Crane Prairie Reservoir may be unusually low for this date. The flow of these springs is an important part of the total flow of this stream.

Soil moisture is record low. It is hoped fall rainfall will correct this.

The water supply outlook for the 1968 season is only fair. Winter precipitation and snow accumulation will need to be substantially above average to provide satisfactory streamflow next season.

Hood River-White River-Mile Creeks-Lower Deschutes Watersheds

Irrigation water supplies in the Hood River-Wasco County area in the 1967 season have been "tight" but adequate for most organized irrigation districts. The Mile Creeks in Wasco County apparently had shorter water supplies than last year.

Snowpacks and precipitation have been below the 15-year average (1948-62) this season, accounting for the below average flow of streams. Parkdale precipitation was only 66 percent average from September 1, 1966 through September 30, 1967.

Soil moisture has been near record low but fall rains have already begun to re-prime the watersheds. It is hoped that further priming can occur before the winter freeze-up of the watersheds.

The outlook for water supplies in the 1968 season is only fair. Winter precipitation and snow accumulation must be greater than average to provide satisfactory streamflow next season.

Willamette Watersheds

The 1967 summer flow of streams into the Willamette Valley has been much below the 15-year average (1948-62) but not as low as a year ago.

Below average precipitation and a short snowpack in the Cascade Mountains laid the basic conditions which produced below average streamflow. The excessive summer heat and zero precipitation forced streamflow even lower.

Preliminary data from the U. S. Geological Survey report the Middle Fork of the Willamette River produced a total flow 74 percent of average April 1 through September 30. Last year the flow in this stream was only 66 percent average for the same six months.

Total stored water supplies in 11 reservoirs is about 107 percent of average, slightly less water than was in storage a year ago.

Rogue-Umpqua Watersheds

Irrigation water supplies in the 1967 season in Douglas, Jackson, and Josephine Counties have been adequate in most areas but below the 15-year average (1948-62). Lands irrigated from natural flow of streams have had less water than usual, especially in the latter part of the season.

Provisional records of the U. S. Geological Survey show flow of the Umpqua River at Elkton from April 1 through September 30 was 78 percent of the 15-year average (1948-62). In 1966 for the same six months the flow was only 66 percent average.

Flow of the Rogue River at Raygold was 90 percent of average April through September this year, and 82 percent average last year.

U. S. Weather Bureau records show precipitation at Medford for the April-September period was 75 percent average this year and 72 percent in the same six months last year.

Water storage at season's end in five local reservoirs in Jackson County totals 65,900 acre feet compared with 58,200 acre feet last year. The average storage on this date is about 57,000 acre feet which is carried over into the next season.

Klamath Watershed

Water supplies in Klamath Basin in the 1967 season were adequate and carryover water in three large reservoirs is 16 percent greater than usual.

Mountain snowpacks increased after their usual April first peak and provided better water supplies than were forecast for the spring season. Streamflow after June fell off rapidly to less than half the usual figures.

The extreme heat and "short" precipitation in July, August, and September greatly reduced streamflow throughout the basin. U. S. Weather Bureau records show precipitation at Klamath Falls for these three summer months was only 0.06 inch compared with an average of 1.51 inches.

Inflow to Upper Klamath Lake in the April-September period was 606,700 acre feet or 95 percent of the 15-year average (1948-62) according to preliminary data from Pacific Power and Light Company records. Last year's flow for the same six months was only 67 percent average.

Base flow of streams and springs in the Klamath Basin, according to preliminary data furnished by U. S. Geological Survey, is lower than last year at 9 out of 15 measured stations. This may indicate a reduced ground-water supply.

Lake County Watersheds

Irrigation water supplies in Lake County in the 1967 season have been fairly satisfactory through July, but after that date the extreme heat and the lack of precipitation reduced streamflow to very low levels. Even so, this has been an excellent year for hay.

Lands served from stored water supplies had an excellent season and carryover storage is satisfactory in many reservoirs. Drews Valley Reservoir has a carryover of 35,000 acre feet which is better than the average of 25,000.

U. S. Weather Bureau records indicate that precipitation at Lakeview has been 6 percent above the 15-year average (1948-62) for the full year from October 1, 1966 to September 30, 1967. However, figures for April through September are only 89 percent average and for the period June 1 through September 30 only half of the average.

Stock water on the range is relatively scarce but many springs are continuing to run although at below average amounts.

Soil moisture is greatly deficient, but apparently not so greatly depleted as at this time last year. It is hoped that fall rains will re-prime the soils before the annual winter freeze-up occurs.

Harney Basin Watersheds

Irrigation water supplies in Harney Basin in the 1967 season have been fairly adequate. The runoff actually came about a month late, peaking higher than usual in May and dropping fast after the middle of June to very low flows.

Records of precipitation at the U. S. Weather Bureau at Burns indicate a total of 111 percent of the 15-year average (1948-62) for the water year from October 1, 1966 to September 30, 1967. However, precipitation in the April first through September period was 85 percent average with only 0.35 inch measured in the July-August-September period.

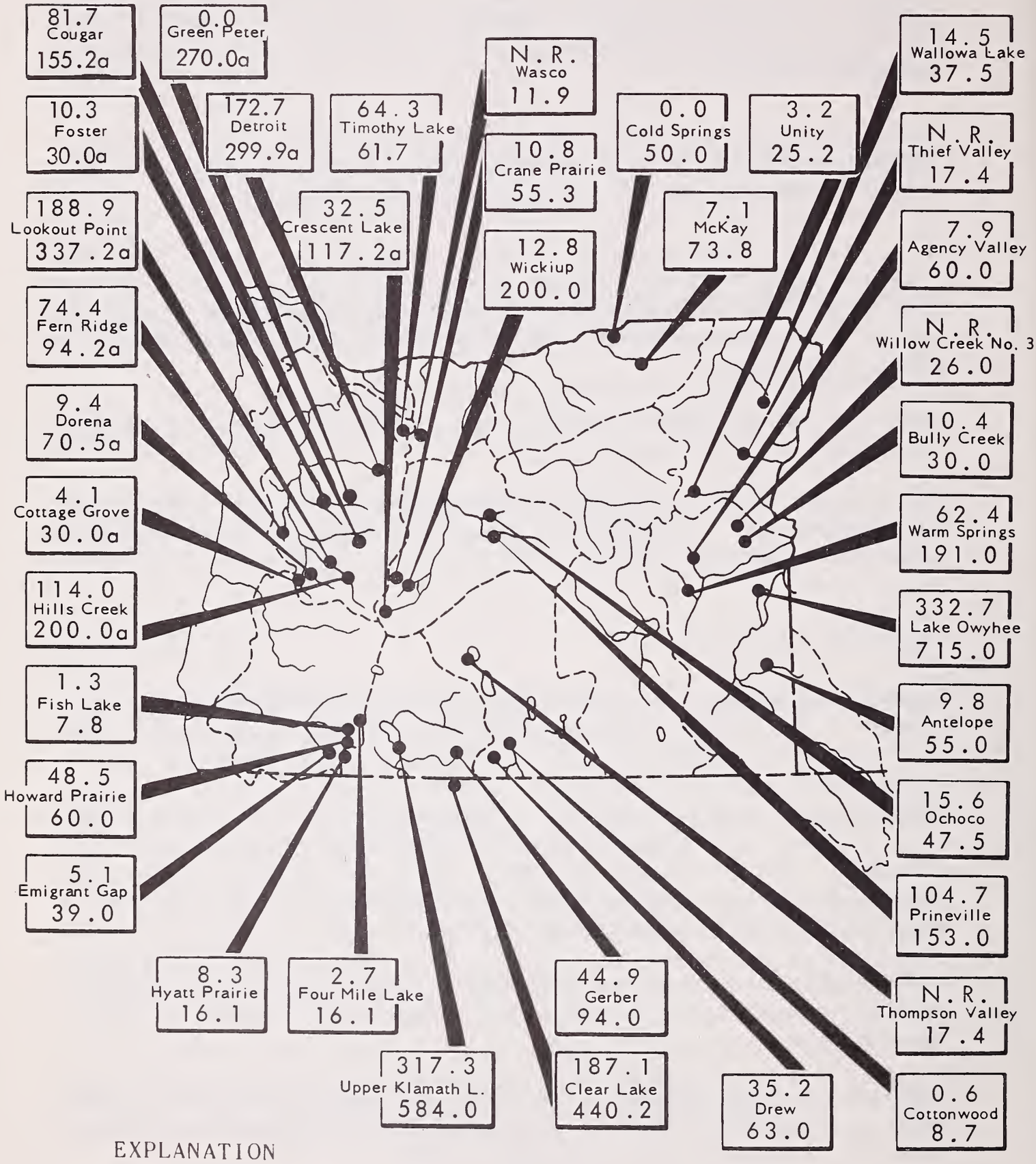
Range conditions have been unusually good with substantial forage production. Many of the small livestock reservoirs still contain water according to one recent observer.

Soil moisture is extremely low but fall rains have already begun the re-priming which must take place, either by direct rainfall or by snow-melt next spring, before any substantial runoff takes place in 1968.

Carryover water supplies in Moon Reservoir on Silver Creek and Krumbo Reservoir on the Blitzen are apparently above average, which is a good start for the 1968 season.

STORAGE STATUS of OREGON RESERVOIRS
usable contents in thousands of acre feet

October 1, 1967



EXPLANATION

687.0 Lake Owyhee 715.0 ---Contents / ---Capacity

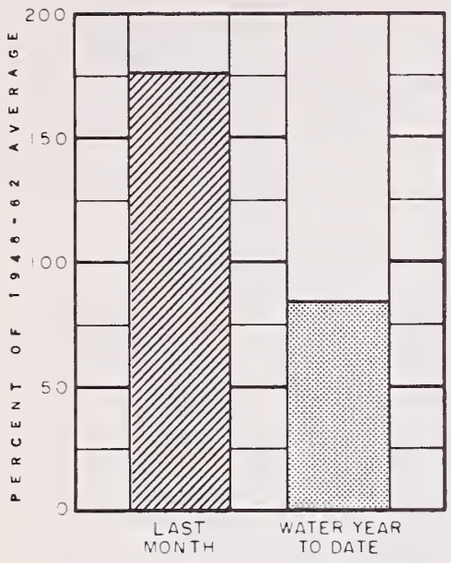
(a) Multiple purpose reservoir - space reserved for flood runoff.
N. R. - No report.

STATUS OF RESERVOIR STORAGE, OCTOBER 1, 1967

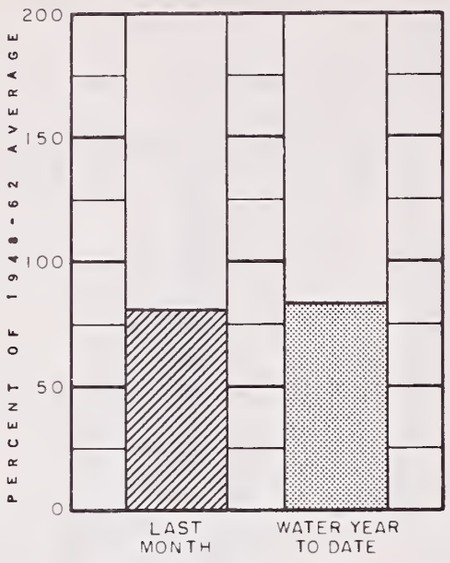
RESERVOIR	USABLE CAPACITY (Thous. A.F.)	THOUSANDS ACRE FEET IN STORAGE ABOUT OCT. 1 1967	1966	15-year Average 1948-62
UPPER COLUMBIA DRAINAGE				
Antelope	55.0	9.8	0.0	- -
Owyhee	715.0	332.7	270.1	270.4
Agency Valley	60.0	7.9	3.5	7.8
Bully Creek	30.0	10.4	1.1	- -
Warmsprings	191.0	62.4	33.1	33.9
Unity	25.2	3.2	0.7	2.9
Wallowa Lake	37.5	14.5	2.2	13.6
LOWER COLUMBIA DRAINAGE				
Cold Springs	50.0	0.0	0.0	3.0
McKay	73.8	7.1	0.2	8.7
Ochoco	47.5	15.6	9.2	15.5
Prineville	153.0	104.7	90.8	- -
Crane Prairie	55.3	10.8	12.2	32.9
Crescent Lake	86.9	32.5	35.1	33.8
Wickiup	200.0	12.8	28.3	38.1
Cottage Grove	30.0	4.1	0.0	7.5
Cougar	155.2	81.7	100.1	- -
Detroit	299.9	172.7	199.3	194.0
Dorena	70.5	9.4	6.0	14.3
Fall Creek	115.0	10.4	10.2	- -
Fern Ridge	94.2	74.4	66.4	45.9
Foster	30.0	10.3	New	
Green Peter	270.0	0.0	New	
Hills Creek	200.0	114.0	78.6	- -
Lookout Point	337.2	188.9	218.3	174.6
Timothy Lake	61.7	64.3	62.5	55.6
WEST COAST DRAINAGE				
Fourmile Lake	16.1	2.7	4.4	6.4
Fish Lake	7.8	1.3	0.9	2.1
Howard Prairie	60.0	48.5	37.1	- -
Hyatt Prairie	16.1	8.3	9.6	5.5
Emigrant Lake	39.0	5.1	6.2	10.2
Upper Klamath	584.0	317.3	285.3	295.4
Gerber	94.0	44.9	29.7	20.1
Clear Lake	440.2	187.1	151.8	157.3
Cottonwood	8.7	0.6	0.1	0.3
Drew	63.0	35.2	20.3	25.0

CURRENT OREGON STREAMFLOW

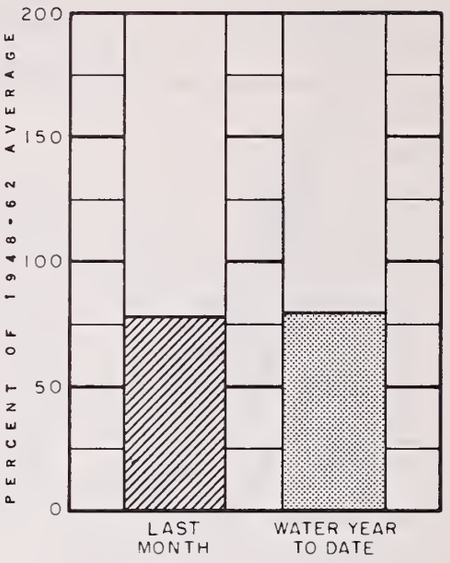
October 1, 1967



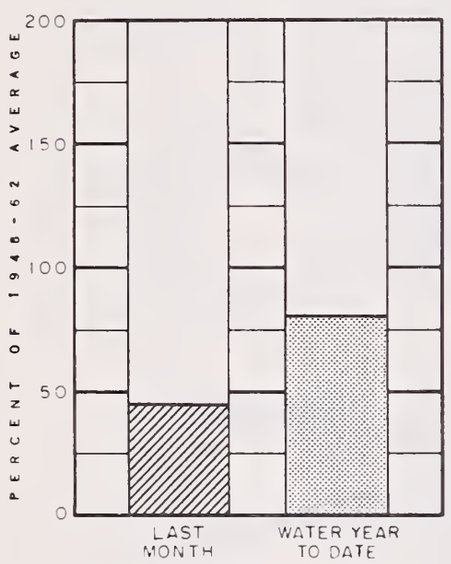
Owyhee Lake net inflow



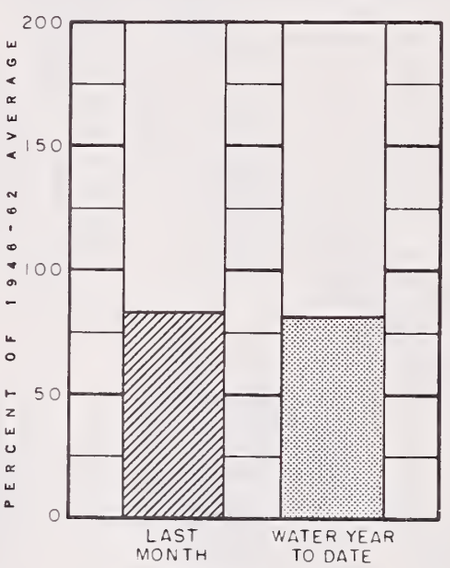
Grande Ronde at La Grande



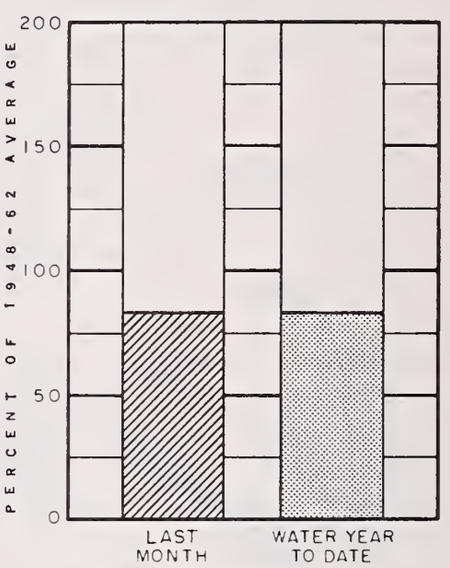
Umatilla at Pendleton



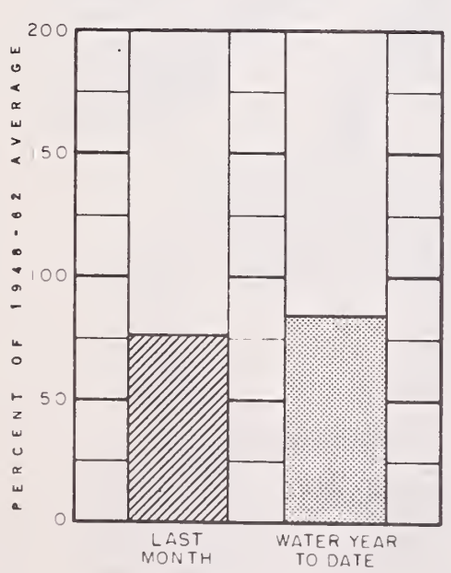
John Day at Service Creek



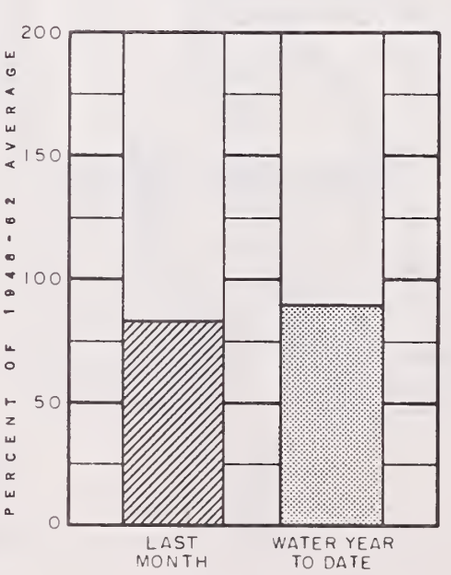
Deschutes at Moody



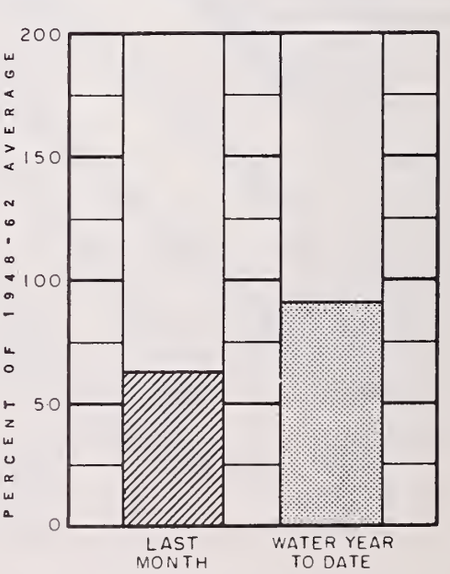
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



Rogue at Raygold



Upper Klamath Lake net inflow

Data furnished by U.S. Geological Survey; The Pacific Power and Light Co.; North and South Boards of Control Owyhee Project; U.S. Bureau of Reclamation.

SOIL MOISTURE

STATION NAME	ELEVATION	PROFILE (Inches) DEPTH	PROFILE (Inches) CAPACITY	SOIL MOISTURE (Inches) DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
		AREA 1					
Bear Creek (Nev.)	7800	72	16.8				
Big Bend (Nev.)	6700	48	16.7	9-26-67	15.0	15.0	- -
Blue Mountain Springs	5900	42	16.9	9-26-67	5.4	5.6	6.4
Crane Prairie	5375	48	18.2	9-26-67	14.5	14.3	14.7
Folly Farm	4450	30	12.5				
Jack Creek, Lower (Nev.)	6800	48	8.6	9-27-67	7.3	- -	- -
Jordan Valley	4390	48	19.3	9-27-67	13.2	13.2	14.6
Mud Flat (Ida.)	5500	48	12.8	10-3-67	8.7	9.0	6.8
Rodeo Flat (Nev.)	6800	42	11.0	9-27-67	9.9	10.1	10.2
Stinking Water Summit	4800	48	21.9				
Taylor Canyon (Nev.)	6200	48	15.1	9-27-67	11.3	10.6	12.5
Triangle (Ida.)	5150	48	16.6	10-3-67	7.8	- -	14.1
		AREA 2					
Blue Mountain Summit	5100	36	16.8	9-27-67	7.7	7.6	8.7
Dooley Mountain	5430	36	7.5	9-27-67	1.9	1.9	2.1
Emigrant Springs	3925	48	22.3	9-26-67	10.8	9.5	17.4
Ladd Summit	3730	48	18.9	9-27-67	8.6	8.7	9.1
Moss Spring	5850	42	25.8	9-27-67	10.6	11.2	- -
Tollgate	5070	48	23.6	9-26-67	10.3	12.6	13.2
		AREA 3					
Athena-Weston	1700	48	18.7	9-26-67	11.1	9.7	12.0
Battle Mountain Summit	4340	48	13.8	9-26-67	9.5	10.5	10.7
Emigrant Springs	3925	48	22.3	9-26-67	10.8	9.5	17.4
Tollgate	5070	48	23.6	9-26-67	10.3	12.6	13.2
		AREA 4					
Battle Mountain Summit	4340	48	13.8	9-26-67	9.5	10.5	10.7
Beech Creek	4800	48	21.3	9-26-67	5.4	5.5	8.2
Blue Mountain Springs	5900	42	16.9	9-26-67	5.4	5.6	6.4
Blue Mountain Summit	5100	36	16.8	9-27-67	7.7	7.6	8.7
Derr	5670	24	9.0	9-26-67	3.7	- -	- -
Marks Creek	4540	36	14.1	9-25-67	8.7	10.3	9.9
Snow Mountain	6300	48	16.7	9-27-67	9.9	9.9	10.9
Starr Ridge	5150	36	10.6	9-26-67	7.0	7.0	7.3
Williams Ranch	4500	42	14.7	9-26-67	11.4	11.5	12.2
		AREA 5					
Derr	5670	24	9.0	9-26-67	3.7	- -	- -
Marks Creek	4540	36	14.1	9-25-67	8.7	10.3	9.9
Snow Mountain	6300	48	16.7	9-27-67	9.9	9.9	10.9
		AREA 10					
Bly Mountain	5090	42	14.0	9-26-67	7.9	6.8	8.6
		AREA 11					
Camas Creek	5720	42	14.5	9-25-67	9.7	7.2	8.8
Quartz Mountain	5320	48	15.3	9-26-67	4.7	4.4	6.6
		AREA 12					
Blue Mountain Springs	5900	42	16.9	9-26-67	5.4	5.6	6.4
Fish Creek	7900	48	15.0				
Folly Farm	4450	30	12.5				
Silvies	6900	48	16.4	9-24-67	11.8	11.4	11.5
Snow Mountain	6300	48	16.7	9-27-67	9.9	9.9	10.9
Starr Ridge	5150	36	10.6	9-27-67	7.0	7.0	7.3
Stinking Water Summit	4800	48	21.9				
Willow-Bald	5000	24	8.8	9-27-67	3.4	3.0	3.4

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE
- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil and Water Conservation Districts of Oregon

COUNTY
- Douglas County Water Resources Survey

FEDERAL
- Department of Agriculture
  - Cooperative Extension Service
  - Forest Service
  - Soil Conservation Service
- Department of Commerce
  - Weather Bureau
- Department of the Interior
  - Bonneville Power Administration
  - Bureau of Land Management
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey
  - National Park Service
- Department of National Defense
  - Corps of Army Engineers

PUBLIC UTILITIES
- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES
- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS
- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warmsprings Irrigation District

PRIVATE ORGANIZATIONS
- Amalgamated Sugar Company
- The Crag Rats, Hood River, Oregon

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Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation , navigation , mining and industry

"The Conservation of Water begins with the Snow Survey"